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<b>Notic of Allowability</b>	Application N .	Applicant(s)	
	10/721,748	OYAMA ET AL.	
	Examiner	Art Unit	
	Nguyen T Ha	2831	

**-- The MAILING DATE of this c mmunication appears on the cover sheet with the correspondenc address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 11/26/2003 & 3/15/04.
2. ☒ The allowed claim(s) is/are 1-6.
3. ☒ The drawings filed on 15 March 2004 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) f each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachm nt(s)**

- |  |  |
|--|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____. |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date <u>0304</u> | 7. <input type="checkbox"/> Examiner's Amendment/Comment                               |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material                           | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance   |
|  | 9. <input type="checkbox"/> Other _____.   |

## **DETAILED ACTION**

### ***Allowable Subject Matter***

1. Claims 1-6 are allowed.

The following is an examiner's statement of reasons for allowance:

With respect to claims 1-2 and 5-6, the prior art alone or in combination does not teach the limitation of an electric double layer capacitor comprising: a metal collector foil having etched upper and lower surface layers and an unetched central layer disposed between the etched upper and lower surface layers, wherein the metal collector foil has a capacitance per unit area that corresponds to a capacitance value obtained when the etched metal collector foil is subjected to an anodic formation process with application of a withstanding voltage of 65.5 volts, the capacitance value being not less than  $1.7 \mu\text{F}/\text{cm}^2$ , and the unetched central layer having a thickness sufficient to provide the metal collector foil with a tensile strength not less than  $9,000 \text{ N}/\text{cm}^2$ .

With respect to claims 3-4, the prior art alone or in combination does not teach the limitation of a method of producing a metal collector foil for use in an electric double layer capacitor comprising the steps of: etching the metal foil in a chloride solution to dissolve a surface of the metal foil until etched upper and lower surface layers of the metal foil have a total thickness sufficient to provide the metal foil with a capacitance per unit area that corresponds to a capacitance value obtained when the etched metal collector foil is subjected to an anodic formation process with application of a withstanding voltage of 65.5 volts, the capacitance value being not less than  $1.7 \mu\text{F}/\text{cm}^2$ .

cm<sup>2</sup>, and the unetched central layer having a thickness sufficient to provide the metal collector foil with a tensile strength not less than 9,000 N/cm<sup>2</sup>.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

#### **Citation Relevant of Prior Art**

2. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. Takeuchi et al. disclose an electric double-layer capacitor and carbon material.

b. Nanjundiah et al. disclose an electrochemical double layer capacitor having carbon powder electrodes.

c. Bendale et al. disclose electrochemical double layer capacitor having carbon power electrodes.

d. Feger discloses conductive electrolyte for high voltage capacitors.

e. Suhara et al. disclose electrode assembly and electric double layer capacitor.

f. Tsumima et al. disclose an electric double layer capacitor and separator.

#### **Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nguyen T Ha whose telephone number is 571-272-

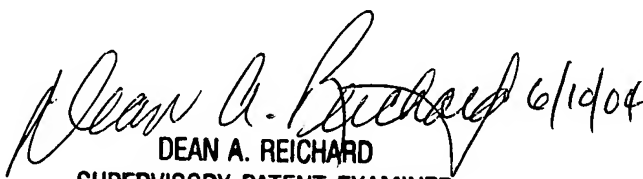
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1974. The examiner can normally be reached on Monday-Friday from 8:30AM to 6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard can be reached on 571-272-2800 ext. 31. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

**Nguyen T. Ha**  
**June 2, 2004**

 6/19/04  
DEAN A. REICHARD  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800